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72

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/705,838	11/03/2000	Yoshio Nakagawa	207138	8053

23460 7590 04/01/2002

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EXAMINER

CHANG, VICTOR S

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 04/01/2002

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/705,838

Applicant(s)

NAKAGAWA ET AL.

Examiner

Victor S Chang

Art Unit

1771

-- Th MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,5,6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 1-2, 8-11 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The composition of the olefin polymer as set forth in claim 3 is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). More particularly, Applicants' specification at page 3, lines 25-32 appears to teach that the embodiment of claim 3 is a critical element of the claimed invention.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1771

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 1-2 and 8-11 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over WO 97/05206, Nippon Petrochem (JP 0504249), or Tucker (US 5498476).

WO '206 teaches that a pressure sensitive adhesive tape comprises a tape substrate coated on one side thereof with an adhesive. The tape substrate comprises:

- (a) from 40% to 85% wt. of at least one copolymer of olefin with vinyl or acrylic esters;
- (b) from 0% to 20% wt. of low density polyethylene; (c) from 20% to 55% wt. of inorganic filler and/or flame retardant consisting of any of the following either alone or in combination; aluminum trihydrate filler, zinc borate, and organic polyphosphate, polyammonium phosphate or magnesium hydroxide (Abstract).

Nippon '249 teaches an adhesive material layer is provided on a base surface consisting of a polyolefin resin composite containing the following (A) and (B). The polyolefin resin composite is formed of 100 parts by weight of (A) a polyolefin resin (A1), a polyolefin resin (A2) containing reactive compounds such as A1: carboxylic group, carboxylic ester group and the like, or resin composites thereof, and 30-200 parts by weight of (B) an inorganic flame retardant (Abstract).

Tucker's invention provides electrical tapes comprising a halogen-free backing film which comprises a resin component containing: (a) from 0 to about 40 parts of a rubber selected from EP or EPDM, (b) from about 60 to about 100 parts of an ethylene

Art Unit: 1771

vinyl acetate (EVA) polymer, and (c) from about 40 to about 150 parts ethylene diamine phosphate per 100 parts of said resin component (column 3, lines 9-23).

Since halogen free olefin polymers having an inherent thermal deformation at 100°C of not more than 65% are widely available for the polymers of the above inventions, claim 1 either lacks novelty, or would be obvious to one of ordinary skill. As for the thermal deformation property, the elongation at break, the parts by weight of flame retardant, and the dynamic storage modulus parameters, they are each believed to be either expressly or inherently disclosed, or an obvious selection to one of ordinary skill.

5. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tucker et al. (US 5498476) either individually or, in the alternative, in view of WO 97/05206.

Tucker's invention provides electrical tapes comprising a halogen-free backing film which comprises a resin component containing: (a) from 0 to about 40 parts of a rubber selected from EP or EPDM, (b) from about 60 to about 100 parts of an ethylene vinyl acetate (EVA) polymer, and (c) from about 40 to about 150 parts ethylene diamine phosphate per 100 parts of said resin component (column 3, lines 9-23). The tape self-extinguishes in less than about 5 seconds, and features an adhesive coated on one major surface of said backing (column 3, lines 27-29). Further, Tucker discloses that Infrared analysis was conducted on samples of EDAP, EDAP in EVA/EPDM and EDAP in EVA/EPDM with aminofunctional silane, and the results indicated there was no chemical reaction between the EVA and the EDAP with or without the amino-functional

Art Unit: 1771

silane, therefore the polymer blend is not crosslinked (column 10, lines 38-44).

Additionally, the Examiner takes Official notice that in general the melting point of EVA is inherently less than 120°C.

Although Tucker uses phosphate flame retardant instead of the preferred (claim 9, 18) metal hydroxide as the instant claimed invention, Tucker teaches that the use of a metal hydroxide as flame retardant is well known in the prior art for EP, EPDM, and EVA (column 1, lines 32-34, US 5017637). Alternatively, WO '206 teaches that a pressure sensitive adhesive tape comprises a tape substrate coated on one side thereof with an adhesive. The tape substrate comprises: (a) from 40% to 85% wt. of at least one copolymer of olefin with vinyl or acrylic esters; (b) from 0% to 20% wt. of low density polyethylene; (c) from 20% to 55% wt. of inorganic filler and/or flame retardant consisting of any of the following either alone or in combination; aluminum trihydrate filler, zinc borate, and organic polyphosphate, polyammonium phosphate or magnesium hydroxide. As such, in the absence of unexpected results, it would be obvious to one of ordinary skill to substitute Tucker's phosphate based flame retardant with metal hydroxide based flame retardant, as taught by WO '206, motivated by lower cost or availability, and by the expectation of success of success imparted by the prior art.

Regarding Tucker's teachings as lacking the specific claimed physical properties, such as the thermal deformation, elongation at break and dynamic storage modulus, it is noticed that the scope of the polymer blend in the instant claimed invention is essentially the same as Tucker's invention, therefore the Examiner takes Official notice that these physical properties are either inherent in the flame retardant containing

Art Unit: 1771

polymer blends, which are taught by Tucker's teachings, or alternatively would be obvious to one having ordinary skill in the art to optimize these physical properties for adhesive backing application, as taught by Tucker. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor S Chang whose telephone number is 703-605-4296. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

VSC
VSC
March 26, 2002

DANIEL ZIRKER
PRIMARY EXAMINER
GROUP 1800-
1700

Daniel Zinker